



Solid State Devices, Inc.

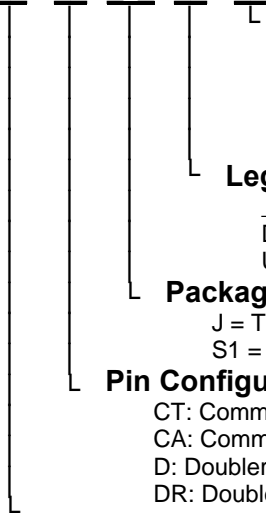
14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SDR6210CT thru SDR6212CT Series

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR62



Screening ^{2/}
 ___ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Leg Bend
 ___ = Straight
 DB = Down Bend
 UB = Up Bend

Package
 J = TO-257
 S1 = SMD1 (CT configuration only)

Pin Configuration
 CT: Common Cathode
 CA: Common Anode
 D: Doubler
 DR: Doubler Reverse

Voltage
 10 = 1000V
 11 = 1100V
 12 = 1200V

40 AMPS
1000 - 1200 VOLTS
35 nsec
HYPER FAST
CENTERTAP RECTIFIER

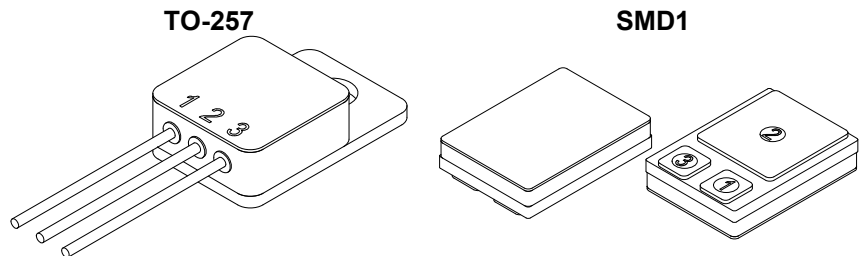
FEATURES:

- Hyper Fast Recovery: 35 nsec Maximum ^{3/}
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Isolated Hermetically Sealed Package with ceramic seals (TO-257)
- Ultrasonic Aluminum Wire Bonds
- Custom Lead Forming Available
- TX, TXV, and Space Level Screening Available Consult Factory. ^{2/}
- Upgrade to the HFA35HB120C

MAXIMUM RATINGS	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR6210	V _{RRM}	1000
	SDR6211	V _{RWM}	1100
	SDR6212	V _R	1200
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A =25°C) ^{4/}	I _O	40 ^{6/}	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A =25°C) ^{5/}	I _{FSM}	150	Amps
Operating and Storage Temperature	T _{OP} & T _{STG}	-65 to +200	°C
Maximum Thermal Resistance Junction to Case ^{4/} Junction to Case ^{5/}	R _{θJC}	1.2	°C/W
		2.0	

NOTES:

- 1/ For ordering information, price, operating curves, and availability - contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Recovery conditions: I_F = 0.5 Amp, I_R = 1.0 Amp, rec. to 0.25 Amp.
- 4/ Both legs tied together.
- 5/ Per leg.
- 6/ Doublers: I_O = 20A/leg. TO257: max 30A in the center tap; wirebond limited



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

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ELECTRICAL CHARACTERISTICS (Per Leg)		Symbol	Typ	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 5$ Amps, 300 μ sec Pulse)	$T_A = 25^\circ\text{C}$	V_{F1}	1.85	2.3	Volts
	$T_A = 100^\circ\text{C}$		1.55	2.0	
	$T_A = 125^\circ\text{C}$		1.45	-	
	$T_A = 150^\circ\text{C}$		1.38	-	
Instantaneous Forward Voltage Drop ($I_F = 10$ Amps, 300 μ sec Pulse)	$T_A = 25^\circ\text{C}$	V_{F2}	2.00	2.5	Volts
	$T_A = 100^\circ\text{C}$		1.80	2.3	
	$T_A = 125^\circ\text{C}$		1.71	-	
	$T_A = 150^\circ\text{C}$		1.65	-	
Instantaneous Forward Voltage Drop ($I_F = 20$ Amps, 300 μ sec Pulse)	$T_A = 25^\circ\text{C}$	V_{F3}	2.20	2.7	Volts
	$T_A = 100^\circ\text{C}$		2.10	2.6	
	$T_A = 125^\circ\text{C}$		2.05	-	
	$T_A = 150^\circ\text{C}$		2.0	-	
Reverse Leakage Current (Rated V_R , 300 μ sec pulse minimum)	$T_A = 25^\circ\text{C}$	I_R	7.5	50	μA
	$T_A = 100^\circ\text{C}$		0.7	5	mA
	$T_A = 125^\circ\text{C}$		2.8	-	mA
	$T_A = 150^\circ\text{C}$		7.8	-	mA
Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1$ A, $I_{RR} = 0.25\text{A}$)	$T_A = 25^\circ\text{C}$	t_{rr1}	25	35	ns
	$T_A = 100^\circ\text{C}$		70	-	
	$T_A = 125^\circ\text{C}$		85	-	
Reverse Recovery Time ($I_{RM} = 10\text{A}$, $di/dt = 100$ A/us)	$T_A = 25^\circ\text{C}$	t_{rr2}	70	100	ns
	$T_A = 100^\circ\text{C}$		110	-	
	$T_A = 125^\circ\text{C}$		125	-	
Reverse Recovery Current ($I_{RM} = 10\text{A}$, $di/dt = 100$ A/us)	$T_A = 25^\circ\text{C}$	I_{RM2}	4.65	6	A
	$T_A = 100^\circ\text{C}$		6.5	-	
	$T_A = 125^\circ\text{C}$		7.15	-	
Junction Capacitance ($T_A = 25^\circ\text{C}$, $f = 1$ MHz)	$V_R = 5$ V _{DC}	C_J	20	-	pF
	$V_R = 10$ V _{DC}		20	50	

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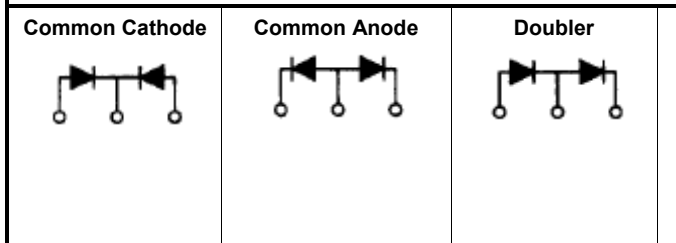
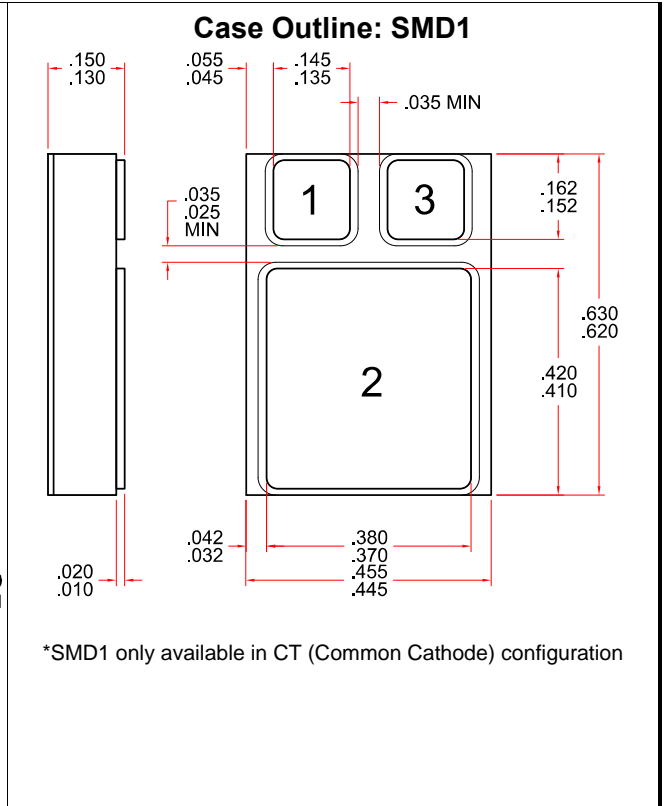
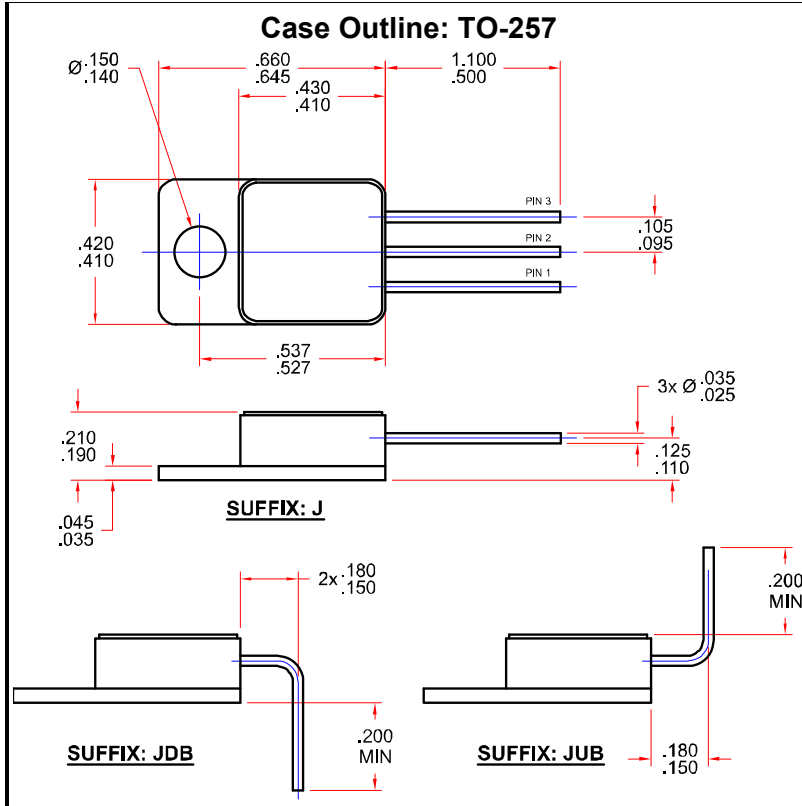
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PIN ASSIGNMENT				
CODE	FUNCTION	PIN 1	PIN 2	PIN 3
CT	Common Cathode	Anode 1	Cathode	Anode 2
CA	Common Anode	Cathode 1	Anode	Cathode 2
D	Doubler	Cathode 1	Cathode2/Anode 1	Anode 2
DR	Doubler Reverse	Anode 1	Cathode1/Anode 2	Cathode 2

Available in Following Configurations:

Common Cathode Centertap: SDR6210CTJ, SDR6210CTJDB, SDR6210CTJUB, SDR6210CTS1, SDR6211CTJ, SDR6211CTJDB, SDR6211CTJUB, SDR6211CTS1, SDR6212CTJ, SDR6212CTJDB, SDR6212CTJUB, SDR6212CTS1

Common Anode Centertap: SDR6210CAJ, SDR6210CAJDB, SDR6210CAJUB, SDR6211CAJ, SDR6211CAJDB, SDR6211CAJUB, SDR6212CAJ, SDR6212CAJDB, SDR6212CAJUB

Doubler: SDR6210DJ, SDR6210DJDB, SDR6210DJUB, SDR6211DJ, SDR6211DJDB, SDR6211DJUB, SDR6212DJ, SDR6212DJDB, SDR6212DJUB, SDR6210DRJ, SDR6210DRJDB, SDR6210DRJUB, SDR6211DRJ, SDR6211DRJDB, SDR6211DRJUB, SDR6212DRJ, SDR6212DRJDB, SDR6212DRJUB

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